

ABSTRACT

A system and method reduces the time required by a base station to acquire a fixed subscriber unit in a CDMA communication system by virtually locating of the subscriber units. A base station acquires subscriber units by searching only those code phases concomitant with the largest propagation delay possible in the cell, as if all subscriber units were located at the periphery of the cell. A subscriber unit which has never been acquired by the base station varies the delay between the PN code phase of its received and transmitted signals over the range of possible delays in a cell and slowly ramps-up its transmission power until it is acquired by the base station. Upon initial acquisition by the base station, the subscriber unit ceases ramping-up its transmission power, ceases varying the delay and internally stores the final value of the delay in memory.